

Serial Number: 09/551,380ENTERED *44**Sequence testing*

Changed a file from non-ASCII to ASCII

Changed the margins in cases where the sequence text was "wrapped" down to the next line.

Edited a format error in the Current Application Data section, specifically:

Edited the Current Application Data section with the actual current number. The number inputted by the applicant was the prior application data; or other _____

Added the mandatory heading and subheadings for "Current Application Data".

Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.

Changed the spelling of a mandatory field (the headings or subheadings), specifically:

Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:

Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.

Inserted colons after headings/subheadings. Headings edited included:

Deleted extra, invalid, headings used by an applicant, specifically:

Deleted: non-ASCII "garbage" at the beginning/end of files; secretary initials/filename at end of file; page numbers throughout text; other invalid text, such as _____

Inserted mandatory headings, specifically:

Corrected an obvious error in the response, specifically:

Edited identifiers where upper case is used but lower case is required, or vice versa.

Corrected an error in the Number of Sequences field, specifically:

A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.

Deleted *ending* stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____

Other: Seq 2,6 - added C220>

*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

3/1/95

RAW SEQUENCE LISTING DATE: 05/09/2000
PATENT APPLICATION: US/09/551,380 TIME: 18:58:43

Input Set : A:\Pto.amc
Output Set: N:\CRF3\05092000\I551380.raw

3 <110> APPLICANT: CHANG, Donald C
4 LUO, Qian
6 <120> TITLE OF INVENTION: Modified Fluorescent Proteins
8 <130> FILE REFERENCE: M99/0321/US
C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/551,380
C--> 11 <141> CURRENT FILING DATE: 2000-04-18
13 <160> NUMBER OF SEQ ID NOS: 32
15 <170> SOFTWARE: PatentIn Ver. 2.1
17 <210> SEQ ID NO: 1
18 <211> LENGTH: 39
19 <212> TYPE: DNA
20 <213> ORGANISM: Artificial Sequence
22 <220> FEATURE:
23 <223> OTHER INFORMATION: Description of Artificial Sequence: PCR primer
25 <220> FEATURE:
26 <221> NAME/KEY: CDS
27 <222> LOCATION: (3)..(38)
29 <400> SEQUENCE: 1
30 ct cca att ggc gat gaa gtc gac ggc cct gtc ctt tta c 39
31 Pro Ile Gly Asp Glu Val Asp Gly Pro Val Leu Leu
32 1 5 10
35 <210> SEQ ID NO: 2
36 <211> LENGTH: 12
37 <212> TYPE: PRT
38 <213> ORGANISM: Artificial Sequence
W--> 39 <220> FEATURE:
40 <223> OTHER INFORMATION: Description of Artificial Sequence: PCR primer
42 <400> SEQUENCE: 2
43 Pro Ile Gly Asp Glu Val Asp Gly Pro Val Leu Leu
44 1 5 10
48 <210> SEQ ID NO: 3
49 <211> LENGTH: 39
50 <212> TYPE: DNA
51 <213> ORGANISM: Artificial Sequence
53 <220> FEATURE:
54 <223> OTHER INFORMATION: Description of Artificial Sequence: PCR primer
56 <400> SEQUENCE: 3
57 gtaaaaggac agggccgtcg acttcatcgc caattggag 39
60 <210> SEQ ID NO: 4
61 <211> LENGTH: 4
62 <212> TYPE: PRT
63 <213> ORGANISM: Homo sapiens
65 <400> SEQUENCE: 4
66 Asp Glu Val Asp
67 1
70 <210> SEQ ID NO: 5
71 <211> LENGTH: 720

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72 <212> TYPE: DNA
 73 <213> ORGANISM: Artificial Sequence
 75 <220> FEATURE:
 76 <221> NAME/KEY: CDS
 77 <222> LOCATION: (1)..(714)
 79 <220> FEATURE:
 80 <223> OTHER INFORMATION: Description of Artificial Sequence: Possible
 81 cleavage site
 83 <400> SEQUENCE: 5
 84 atg agt aaa gga gaa gaa ctt ttc act gga gtt gtc cca att ctt gtt 48
 85 Met Ser Lys Gly Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val
 86 1 5 10 15
 88 gaa tta gat ggt gat gtt aat ggg cac aaa ttt tct gtc agt gga gag 96
 89 Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu
 90 20 25 30
 92 ggt gaa ggt gat gca aca tac gga aaa ctt acc ctt aaa ttt att tgc 144
 93 Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys
 94 35 40 45
 96 act act gga aaa cta cct gtt cca tgg cca aca ctt gtc act act ttc 192
 97 Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe
 98 50 55 60
 100 act tat ggt gtt caa tgc ttt tca aga tac cca gat cat atg aaa cag 240
 101 Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln
 102 65 70 75 80
 104 cat gac ttt ttc aag agt gcc atg ccc gaa ggt tat gta cag gaa aga 288
 105 His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg
 106 85 90 95
 108 act ata ttt ttc aaa gat gac ggg aac tac aag aca cgt gct gaa gtc 336
 109 Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val
 110 100 105 110
 112 aag ttt gaa ggt gat acc ctt gtt att aga atc gag tta aaa ggt att 384
 113 Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile
 114 115 120 125
 116 gat ttt aaa gaa gat gga aac att ctt gga cac aaa ttg gaa tac aac 432
 117 Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn
 118 130 135 140
 120 tat aac tca cac aat gta tac atc atg gca gac aaa caa aag aat gga 480
 121 Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly
 122 145 150 155 160
 124 atc aaa gtt aac ttc aaa att aga cac aac att gaa gat gga agc gtt 528
 125 Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val
 126 165 170 175
 128 caa cta gca gac cat tat caa caa aat act cca att ggc gat ggc cct 576
 129 Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro
 130 180 185 190
 132 gtc ctt tta cca gac aac cat tac ctg tcc aca caa tct gcc ctt tcg 624
 133 Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser
 134 195 200 205
 136 aaa gat ccc aac gaa aag aga gac cac atg gtc ctt ctt gag ttt gta 672

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Input Set : A:\Pto.amc
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137 Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val
 138 210 215 220
 140 aca gct gct ggg att aca cat ggc atg gat gaa cta tac aaa taataa 720
 141 Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys
 142 225 230 235
 145 <210> SEQ ID NO: 6
 146 <211> LENGTH: 238
 147 <212> TYPE: PRT
 148 <213> ORGANISM: Artificial Sequence
 W--> 149 <220> FEATURE:
 150 <223> OTHER INFORMATION: Description of Artificial Sequence: Possible
 151 cleavage site
 153 <400> SEQUENCE: 6
 154 Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val
 155 1 5 10 15
 157 Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu
 158 20 25 30
 160 Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys
 161 35 40 45
 163 Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe
 164 50 55 60
 166 Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln
 167 65 70 75 80
 169 His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg
 170 85 90 95
 172 Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val
 173 100 105 110
 175 Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile
 176 115 120 125
 178 Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn
 179 130 135 140
 181 Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Gln Lys Asn Gly
 182 145 150 155 160
 184 Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val
 185 165 170 175
 187 Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro
 188 180 185 190
 190 Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser
 191 195 200 205
 193 Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val
 194 210 215 220
 196 Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys
 197 225 230 235
 201 <210> SEQ ID NO: 7
 202 <211> LENGTH: 4
 203 <212> TYPE: PRT
 204 <213> ORGANISM: Homo sapiens
 206 <400> SEQUENCE: 7
 207 Tyr Val His Asp

RAW SEQUENCE LISTING
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Input Set : A:\Pto.amc
Output Set: N:\CRF3\05092000\I551380.raw

208 1
211 <210> SEQ ID NO: 8
212 <211> LENGTH: 4
213 <212> TYPE: PRT
214 <213> ORGANISM: Artificial Sequence
216 <220> FEATURE:
217 <223> OTHER INFORMATION: Description of Artificial Sequence: Caspase
218 cleavage site
220 <400> SEQUENCE: 8
221 Asp Glu His Asp
222 1
225 <210> SEQ ID NO: 9
226 <211> LENGTH: 4
227 <212> TYPE: PRT
228 <213> ORGANISM: Artificial Sequence
230 <220> FEATURE:
231 <223> OTHER INFORMATION: Description of Artificial Sequence: Possible
232 cleavage site
234 <400> SEQUENCE: 9
235 Trp Glu His Asp
236 1
239 <210> SEQ ID NO: 10
240 <211> LENGTH: 4
241 <212> TYPE: PRT
242 <213> ORGANISM: Artificial Sequence
244 <220> FEATURE:
245 <223> OTHER INFORMATION: Description of Artificial Sequence: Caspase
246 cleavage site
248 <400> SEQUENCE: 10
249 Leu Glu His Asp
250 1
253 <210> SEQ ID NO: 11
254 <211> LENGTH: 4
255 <212> TYPE: PRT
256 <213> ORGANISM: Homo sapiens
258 <400> SEQUENCE: 11
259 Val Glu Ile Asp
260 1
263 <210> SEQ ID NO: 12
264 <211> LENGTH: 4
265 <212> TYPE: PRT
266 <213> ORGANISM: Artificial Sequence
268 <220> FEATURE:
269 <223> OTHER INFORMATION: Description of Artificial Sequence: Caspase
270 cleavage site
272 <400> SEQUENCE: 12
273 Leu Glu Thr Asp
274 1
277 <210> SEQ ID NO: 13

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Input Set : A:\Pto.amc
Output Set: N:\CRF3\05092000\I551380.raw

278 <211> LENGTH: 4
279 <212> TYPE: PRT
280 <213> ORGANISM: Artificial Sequence
282 <220> FEATURE:
283 <223> OTHER INFORMATION: Description of Artificial Sequence: Caspase
284 cleavage site
286 <400> SEQUENCE: 13
287 Leu Glu His Asp
288 1
291 <210> SEQ ID NO: 14
292 <211> LENGTH: 3
293 <212> TYPE: PRT
294 <213> ORGANISM: Artificial Sequence
296 <220> FEATURE:
297 <223> OTHER INFORMATION: Description of Artificial Sequence: Possible
298 cleavage site
300 <400> SEQUENCE: 14
301 Glu Val Asp
302 1
305 <210> SEQ ID NO: 15
306 <211> LENGTH: 3
307 <212> TYPE: PRT
308 <213> ORGANISM: Artificial Sequence
310 <220> FEATURE:
311 <223> OTHER INFORMATION: Description of Artificial Sequence: Possible
312 cleavage site
314 <400> SEQUENCE: 15
315 Asp Glu Val
316 1
319 <210> SEQ ID NO: 16
320 <211> LENGTH: 4
321 <212> TYPE: PRT
322 <213> ORGANISM: Artificial Sequence
324 <220> FEATURE:
325 <223> OTHER INFORMATION: Description of Artificial Sequence: Possible
326 cleavage site
328 <400> SEQUENCE: 16
329 Asp Glu Asp Asp
330 1
333 <210> SEQ ID NO: 17
334 <211> LENGTH: 5
335 <212> TYPE: PRT
336 <213> ORGANISM: Artificial Sequence
338 <220> FEATURE:
339 <223> OTHER INFORMATION: Description of Artificial Sequence: Possible
340 cleavage site
342 <400> SEQUENCE: 17
343 Asp Glu Val Asp Gly
344 1 5

VERIFICATION SUMMARY DATE: 05/09/2000
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Input Set : A:\Pto.amc
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L:10 M:270 C: Current Application Number differs, Replaced Application Number
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:39 M:283 W: Missing Blank Line separator, <220> field identifier
L:149 M:283 W: Missing Blank Line separator, <220> field identifier